



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0924; Directorate Identifier 2014-NM-228-AD; Amendment 39-18067; AD 2014-25-51]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A318, A319, A320, and A321 series airplanes. This emergency AD was sent previously to all known U.S. owners and operators of these airplanes. This AD requires revising the airplane flight manual to advise the flightcrew of emergency procedures for abnormal Alpha Protection (Alpha Prot). This AD was prompted by a report of Angle of Attack (AoA) probes jamming on an in-service Airbus Model A321 airplane. Jamming of the two AoA probes during climb is attributed to water freezing under the AoA vane slinger, and led to activation of the Alpha Prot while the Mach number increased, which resulted in an airplane pitch down per design. We are issuing this AD to ensure that the flightcrew has procedures to counteract the pitch down order due to abnormal activation of the Alpha Prot. An abnormal Alpha Prot, if not corrected, could result in loss of control of the airplane.

**DATES:** This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] to all persons except those persons to whom it was made immediately effective by Emergency AD 2014-25-51, issued on December 10, 2014, which contained the requirements of this amendment.

We must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0924; or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On December 10, 2014, we issued Emergency AD 2014-25-51, which requires revising the airplane flight manual to advise the flightcrew of emergency procedures for abnormal Alpha Prot. This emergency AD was sent previously to all known U.S. owners and operators of these airplanes.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued Emergency Airworthiness Directive 2014-0266-E, dated December 9, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition on all Model A318, A319, A320, and A321 series airplanes. The MCAI states:

An occurrence was reported where an Airbus A321 aeroplane encountered a blockage of two Angle of Attack (AoA) probes during climb, leading to activation of the Alpha Protection (Alpha Prot) while the Mach number increased. The flightcrew managed to regain full control and the flight landed uneventfully.

When Alpha Prot is activated due to blocked AoA probes, the flight control laws order a continuous nose down pitch rate that, in a worst case scenario, cannot be stopped with backward sidestick inputs, even in the full backward position. If the Mach number increases during a nose down order, the AoA value of the Alpha Prot will continue to decrease. As a result, the flight control laws will continue to order a nose down pitch rate, even if the speed is above minimum selectable speed, known as VLS.

This condition, if not corrected, could result in loss of control of the aeroplane.

To address this unsafe condition, Airbus \*\*\* [has] developed a specific Aircraft Flight Manual (AFM) procedure, which has been published in AFM Temporary Revision (TR) No. 502.

For the reasons described above, this AD requires amendment of the applicable AFM [to advise the flightcrew of emergency procedures for abnormal Alpha Prot].

This is considered to be an interim action and further [EASA] AD action may follow.

### **FAA's Determination and AD Requirements**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **FAA's Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because an abnormal Alpha Prot, if not corrected, could result in loss of control of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2014-0924 and Directorate Identifier 2014-NM-228-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

### **Costs of Compliance**

We estimate that this AD affects 953 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

<b>Estimated costs</b>				
<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
AFM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$81,005

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2014-25-51 Airbus:** Amendment 39-18067; Docket No. FAA-2014-0924; Directorate Identifier 2014-NM-228-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] to all persons except those persons to

whom it was made immediately effective by Emergency AD 2014-25-51, issued on December 10, 2014, which contained the requirements of this amendment.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD.

(1) All Model A318-111, -112, -121, and -122 airplanes.

(2) All Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) All Model A320-211, -212, -214, -231, -232, and -233 airplanes.

(4) All Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 34, Navigation.

**(e) Unsafe Condition**

This AD was prompted by a report of Angle of Attack (AoA) probes jamming on an in-service Airbus Model A321 airplane. Jamming of the two AoA probes during climb is attributed to water freezing under the AoA vane slinger, and led to activation of the Alpha Protection (Alpha Prot) while the Mach number increased, which resulted in an airplane pitch down per design. We are issuing this AD to ensure the flightcrew has procedures to counteract the pitch down order due to abnormal activation of the Alpha Prot. An abnormal Alpha Prot, if not corrected, could result in loss of control of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Revision of Airplane Flight Manual (AFM)**

Within 2 days after the effective date of this AD, revise the AFM to incorporate procedures to address undue activation of Alpha Prot by inserting the text specified in figure 1 to paragraph (g) of this AD into the Emergency Procedures section of the applicable AFM, to advise the flightcrew of emergency procedures for abnormal Alpha Prot. This may be accomplished by inserting a copy of this AD into the AFM. When a statement identical to the text specified in figure 1 to paragraph (g) of this AD is included in the general revisions of the AFM, the general revisions may be inserted in the AFM, and the text specified in figure 1 to paragraph (g) of this AD may be removed.

**Figure 1 to paragraph (g) of this AD - AFM Procedure**

- At any time, with a speed above VLS, if the aircraft goes to a continuous nose down pitch rate that cannot be stopped with backward sidestick inputs, immediately:  
Keep on one ADR.  
Turn off two ADRs.

- If the Alpha Max strip (red) hides completely the Alpha Prot strip (black and amber) in a stabilized wings-level flight path (without an increase in load factor):  
Keep on one ADR.  
Turn off two ADRs.  
*In case of dispatch with one ADR inoperative, switch only one ADR to OFF.*

**CAUTION** RISK OF ERRONEOUS DISPLAY OF THE VSW STRIP (RED AND BLACK)

Consider using the Flight Path Vector (FPV).

- If the Alpha Prot strip (black and amber) rapidly moves by more than 30 kt during flight maneuvers (with an increase in load factor), with AP ON and speed brakes retracted:  
Keep on one ADR.  
Turn off two ADRs.  
*In case of dispatch with one ADR inoperative, switch only one ADR to OFF.*

**CAUTION** RISK OF ERRONEOUS DISPLAY OF THE VSW STRIP (RED AND BLACK)

Consider using the Flight Path Vector (FPV).

**(h) Special Flight Permits**

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

**(i) Other FAA Provisions**

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(j) Related Information**

For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

**(k) Material Incorporated by Reference**

None.

Issued in Renton, Washington, on January 7, 2015.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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